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REMARKS

The Abstract was amended to make it into a single paragraph.

Claims 1-9 are pending and stand rejected.

Claims 1-6 stand rejected, and claims 6-9 are withdrawn.

Claim 1 has been amended to clearly identify that the polymer blend has a polyamide matrix, as supported by original disclosure on page 3, line 3 of the Specification.

RESTRICTION

The Examiner has requested a Restriction to Group I: Claims 1-6 and Group II: Claims 6-9. Applicant, in a phone conversation with the Examiner, has elected Group I, Claims 1-6 with traverse. Claims 7-9 have been withdrawn, and Claim 6 has been amended to include only the single layer embodiment.

Applicant argues that According to M.P.E.P. §803, if there is no serious burden on the part of the Examiner to examine the entire subject matter set forth in a patent application. Then the Examiner must proceed with doing so even if the application is drawn to multiple inventions. In the present application, each of the claims contain essentially the same polyamide/polyolefin blend, and thus the claims are very much related to each other. Accordingly, a search of the polymer blend of Claim 1 would clearly involve a search of a composition comprising a polyamide/polyolefin blend containing carbon nanotubes, as well as any single or multi-layer structures including tubes, bottles, tanks, containers, hoses, pipes and vessels containing this polymer blend.

At a minimum, Claim 6 should include both single and multilayer materials.

35 U.S.C. §103(a)

Claims 1-6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent Number 6,331,265. The '265 reference fails to teach or suggest all of Applicants claim limitations and therefore fails to present a *prima facie* case of obviousness. Specifically, Applicants claim a composition of a polyamide/polyolefin blend containing carbon nanotubes,

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while the '265 patent (to Applicant Company) teaches a method using only a single polymer matrix in which the carbon nanotubes serve as reinforcement.

Surprisingly, Applicant found that in a polyamide/polyolefin blend, having a polyamide matrix, the carbon nanotubes concentrate in the polyamide. Thus the polyamide/polyolefin blend has the same antistatic properties as a polyamide blend containing nanotubes; but by containing much fewer nanotubes, it is less expensive. The result is that a lower level of carbon nanotubes is required in the blend, than in either a pure polyamide, or a pure polyolefin, for the same antistatic properties. An additional advantage of the carbon nanotubes in the polyamide/polyolefin blend is that the barrier properties to alcohol-containing fuels are increased.

The advantage found in the present invention can be seen in Figure 1 of the application. At the same loading level of carbon nanotubes, the polyamide/polyolefin blend has a significantly lower resistivity (better conductivity) than a pure polyamide material.

While the '265 reference describes the use of carbon nanotubes in a polyolefin OR a polyamide, there is no teaching or suggestion of the advantages found by Applicant in using the blend to obtain a lower usage level of the nanotubes for similar antistatic properties. The '265 reference focuses on the reinforcing value of nanotubes in a polymer fiber. One of skill in the art would not be led by routine experimentation to obtain Applicant's invention, since the lower use of nanotubes for similar antistatic properties is not a result-effective variable to be optimized in the '265 patent.

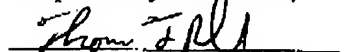
The unexpected results found in the composition claimed by Applicant can well be summarized from the Examiner's own argument. The Examiner contends that "It would have been obvious to one having ordinary skill in the art to use a blend of polyamide and polyolefin, for their expected additive effect, as the polymer component to be reinforced with the carbon nanotubes." Page 4, lines 5-7 of Office Action. Indeed, one of skill in the art would expect an ADDITIVE effect -- for a sum of the same level of carbon nanotube loading for the same properties of the blend composition. Rather, Applicant found that there was actually a SUBTRACTIVE effect in the claimed composition -- a much lower level of carbon nanotubes is required in the blend, than would be required in either of the pure material for the same antistatic effect. Thus the claimed blend composition would not be obvious, as the loading requirements of the nanotubes, and properties of the material are unexpected.

Best Arguments

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Since the cited reference fails to present a *prima facie* case of obviousness over the claims as amended, Applicant believes that the reasons for rejection have been overcome, and the claims herein should be allowable to the Applicant. Accordingly, reconsideration and allowance are requested.

Respectfully submitted,

  
Thomas F. Roland, Esq.  
Attorney for the Applicants  
Reg. No. 42.110

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Arkema, Inc.  
Patent Department - 26th Floor  
2000 Market Street  
Philadelphia, PA 19103-3222  
Tel (215) 419-7314  
Fax (215) 419-7075

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